

Att'y Dkt. No. 003-130

U.S. App. No:10/829,376

REMARKS

Favorable reconsideration, reexamination, and allowance of this application are respectfully requested in view of the following remarks.

Applicants hereby elect the exemplary embodiment illustrated in Figure 1, with traverse.

At least Claim 1, the independent apparatus claim, and Claim 20, the independent method claim, are generic to all the disclosed species of Figures 1 to 9. At least Claims 1, 2, 3, 8, 20, 21, 22, 27, 41, and 42 read on the embodiment illustrated in Figure 1; at least Claims 1, 10, 11, 12, 20, 29, 30, and 31 read on the embodiment illustrated in Figure 2; at least Claims 1, 9, 10, 13, 20, 28, 29, and 32 read on the embodiment illustrated in Figure 3; at least Claims 1, 4, 14, 20, 23, and 33 read on the embodiment illustrated in Figure 4; at least Claims 1, 14, 20, and 33 read on the embodiment illustrated in Figure 5; at least Claims 1, 10, 11, 12, 20, 29, 30, and 31 read on the embodiment illustrated in Figure 6; at least Claims 1, 7, 20, and 26 read on the embodiment illustrated in Figure 7; at least Claims 1, 5, 16, 17, 18, 19, 20, 24, 35, 36, 37, and 38 read on the embodiment illustrated in Figure 8; and at least Claims 1, 5, 7, 15, 20, 24, 26, and 34 read on the embodiment illustrated in Figure 9.

Applicant notes with great appreciation the comments in the Office Action concerning the prior art cited by the Examiner. While Applicant finds that *Stettler* and *Wunning* are not particularly salient, Applicant has the following comments.

One advantage of the present invention is that a highly diluted mode of combustion with a flue gas re-circulation rate of from 100% to 200% can be achieved without the need for additional preheating of the oxidant before it enters the combustion chamber. Such an advantage can be achieved because the oxidant is heated by compression work in the compressor (see, for example, page 11, lines 27 to 31 of the present application). Therefore, there is no need to have an additional component between the compressor and the combustion chamber, for example a heat exchanger, for preheating the oxidant before it enters the combustion chamber.

In contrast, *Stettler* describes at column 6, lines 12-16, that a re-circulation ratio of two is desirable; *Stettler* is silent, however, as to how the re-circulation ratio of two is achieved. Column 2, lines 23-29 of *Stettler* states that, in the combustion zone of the

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burner, the zone fuel is burned in compressed air to heat the motive fluid for the turbine. Figure 1 and column 2, lines 11-41, of *Stettler* illustrate that the motive fluid heated in the burner 4 and used to drive the turbine 3 passes through a heat exchanger 6, where it gives up its heat to compressed gas from the compressor. The gas from the compressor in the invention disclosed in *Stettler* is therefore required to be preheated by additional means before it enters the combustion zone of the burner 4.

Wunning discloses a method and apparatus for combusting fuel in a combustion chamber. Although column 6, lines 36-50 of *Wunning* discusses that a re-circulation ratio can be equal to 2, it does not disclose how this ratio is achieved. In addition, column 3, lines 36-38, discloses that the combustion air is preheated, and column 5, lines 37-41, discloses that the air is preheated in a preheater. *Wunning* is also silent as to the provision of an air compressor for compressing combustion air before it enters the combustion chamber. It therefore appears to be impossible in the *Wunning* apparatus to heat the combustion air (oxidant) by compression work in a compressor. Accordingly, *Wunning* expressly teaches away from achieving a flue gas re-circulation rate of 100-200%, without the need for additional preheating of the oxidant before it enters the combustion chamber.

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If Mr. Gartenberg believes that a telephone conference with the undersigned would expedite passage of the present patent application to issue, he is invited to call on the number below.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and the undersigned hereby authorizes any fees for said petition be charged to our deposit account 50-2821.

Respectfully submitted,

By: 

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